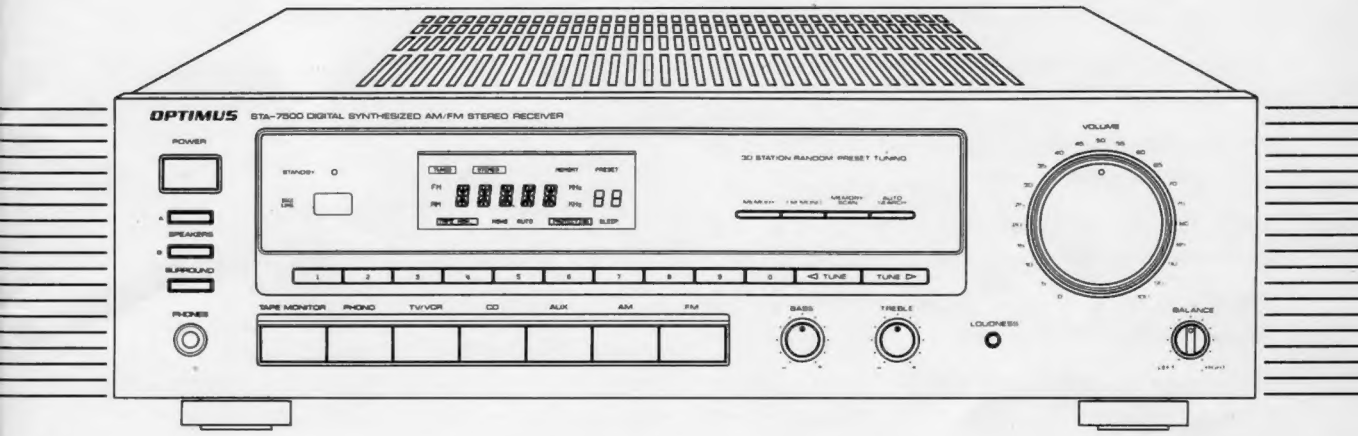
OWNER'S MANUAL

STA-7500
DIGITAL SYNTHESIZED AM/FM STEREO RECEIVER

Please read before using this equipment.



Cat. No. 31-2107

OPTIMUS®

FEATURES

Your Optimus STA-7500 AM/FM Stereo Receiver combines 70 watts per channel of power with modern styling. The STA-7500 is the perfect control center for your audio/video system. It provides connections for a tape deck, turntable, CD player, and TV/monitor or VCR.

Additional features include:

Remote Control — lets you operate the receiver's controls from a distance of up to 20 feet. You can also use the supplied remote control cable to connect the STA-7500 to an Optimus CD-5500 or CD-7500 CD player: or, connect an SCT-5500 or SCT-7500 cassette deck. You can then use the receiver's remote control to operate the connected component.

PLL Frequency-Synthesized Tuner and Digital Display — make radio tuning precise and simple.

Search Tuning — lets you search for the next available station in a band.

30 Memory Presets — store and recall up to 30 radio frequencies.

Auto Muting — eliminates noise as you tune between FM stations.

FM Mono — lets you tune to and improve the sound of weak FM stations.

External Antenna Terminals — let you connect external AM and FM antennas for optimum radio reception. However, the supplied AM loop antenna and the FM line-cord antenna provide adequate reception in most metropolitan areas.

Tape Monitoring — lets you listen to the actual recording as you record, if your tape deck has a tape-monitoring feature.

Bass and Treble Controls — allow independent adjustment of bass and treble frequencies to customize the tone for your listening preferences.

Loudness Feature — boosts the high and low sounds at low volume levels.

Balance Control — lets you adjust the balance of sound between the left and right speakers.

Headphone Jack — lets you connect headphones for private listening and enhanced stereo effect.

Protection Circuits — help prevent damage to the receiver from over-heating or over-driving the receiver's amplifier. Additional protection circuits guard against power surges and short circuits.

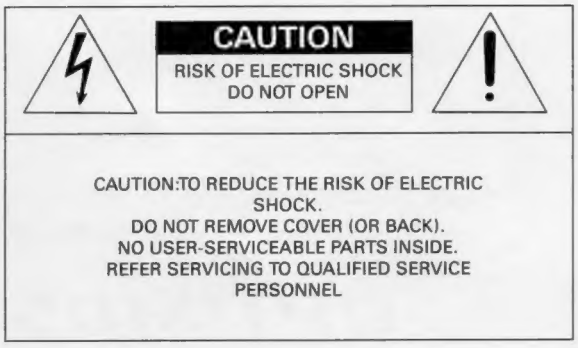
Warning: The receiver's power cord has a polarized plug. To prevent electric shock, do not use an extension cord or other receptacle unless you can fully and easily insert the plug's blades.

Note to CATV System Installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

For your permanent records, we recommend you record the receiver's serial number in the space provided. The serial number is listed on the receiver's back panel.

Serial Number: _____



This symbol is intended to alert you to dangerous voltage inside this unit that can cause shock. Do not open the enclosure.

This symbol is intended to alert you to important operating and maintenance instruction in this owner's manual.

CONTENTS

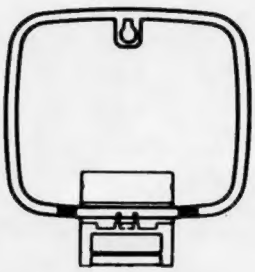
BEFORE YOU BEGIN

Please read this owner's manual carefully. It has been prepared to help you with initial setup procedures and in the everyday operation of your receiver.

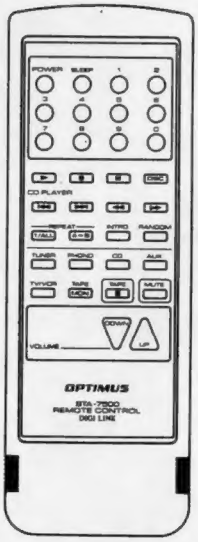
ACCESSORIES

Your Optimus STA-7500 AM/FM Stereo Receiver includes the following accessories. Be sure to remove these items before you store the packing material.

AM Loop Antenna



Remote Control



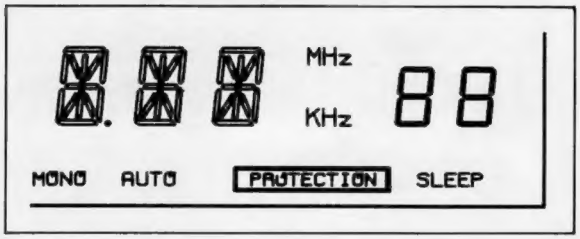
Note: Some connections might require additional supplies that are sold separately. See "Connections."

BUILT-IN PROTECTION CIRCUITS

Your receiver has two special protection circuits:

- The thermal overload protection circuit automatically turns off the receiver's amplifier if it overheats.
- The overdrive protection circuit automatically turns off the amplifier if too much power is being drawn from it.

If a protection circuit turns off the amplifier, the **PROTECTION** indicator comes on.



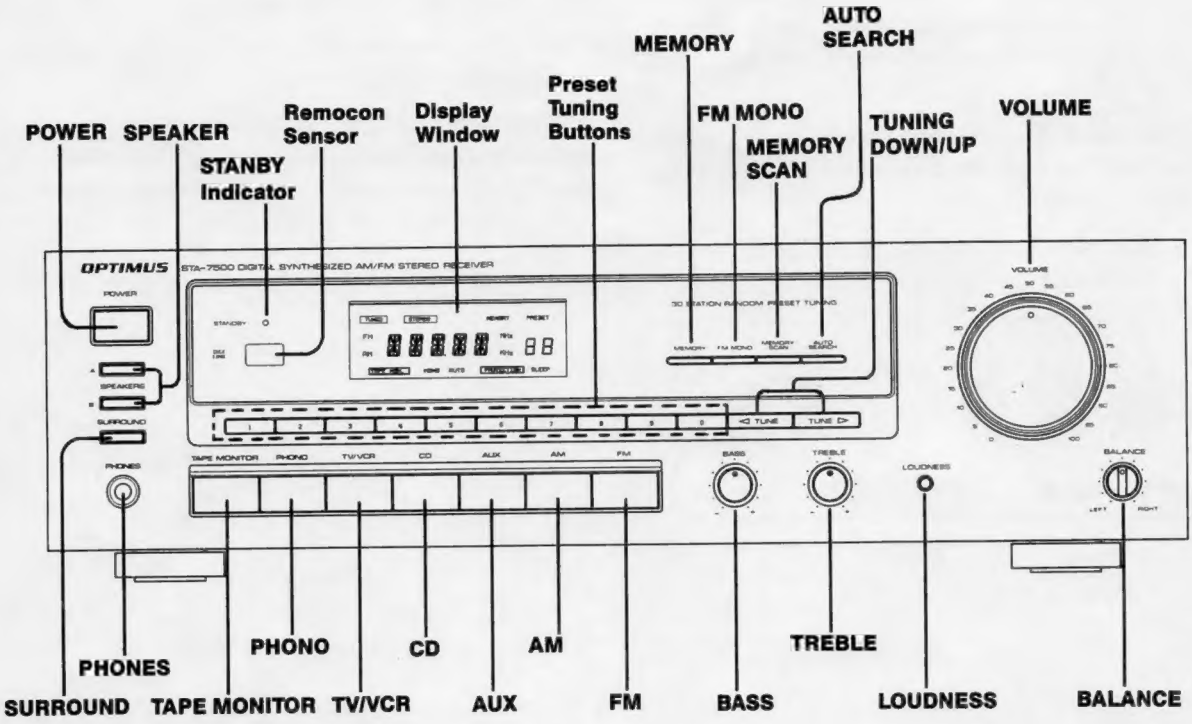
If this happens, press **POWER** to turn off the receiver's power. Then check for proper ventilation and proper speaker connections.

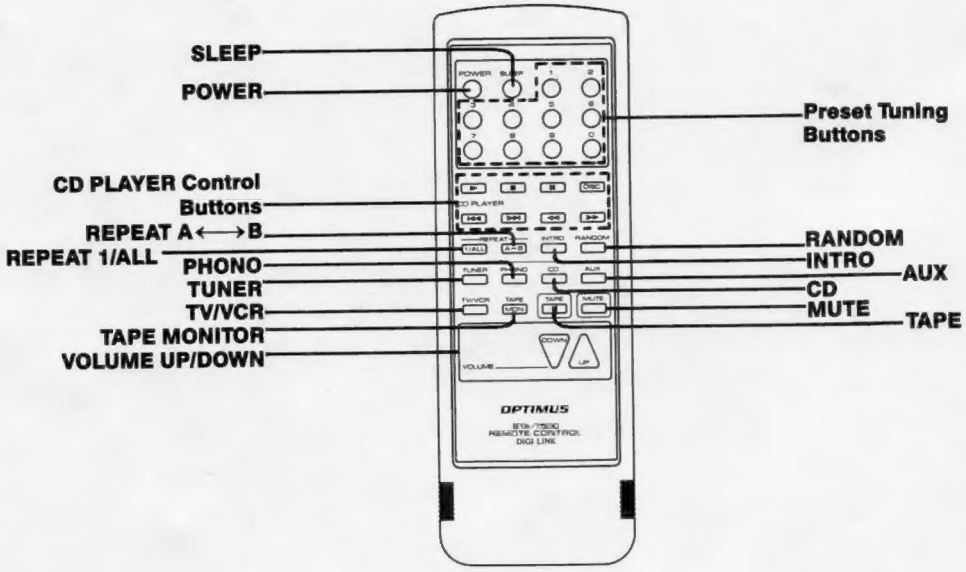
Note: Any speakers you connect to the receiver must have an impedance of 8 to 16 ohms.

The protection circuits usually reset in only a few minutes, so you can turn on and use the receiver again. The circuits seldom take longer than 30 minutes to reset.

CONTROL LOCATIONS

The illustrations below show the controls on the receiver's front panel and remote control.





CONNECTIONS

This section describes components you can connect to create a complete audio/video system. Your local Radio Shack store has a wide selection of audio/video components to suit almost every application and budget.

Caution: Do not plug in or turn on the receiver until you complete all connections for the speakers, audio sources, and antennas.

CONNECTING SPEAKERS

You can connect up to four speakers to the receiver. You can set up one pair of speakers in your main listening area and another pair in a second listening area. Or set up both pairs in a single listening area for a "Surround Sound" effect.

Your stereo system can sound only as good as your speakers allow, so choose the best speakers possible.

For the best performance from your system, select from Radio Shack's fine line of Optimus speakers. Radio Shack also has more economical speakers that provide superb performance as auxiliary speakers or main speakers when used in smaller rooms.

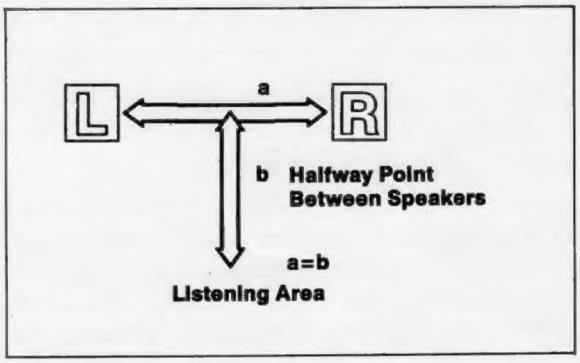
Speaker Guidelines

- Be sure your speakers can handle the receiver's maximum power output of 70 watts. If you consistently listen to music at a higher volume level, we recommend speakers with a higher power rating.
- Use only speakers with an impedance of 8 to 16 ohms.
- Connect no more than two pairs of speakers to the receiver.
- Use 18-gauge speaker wire if your speakers are within 25 feet of the receiver. Use 16-gauge speaker wire for distances greater than 25 feet.
- Use only the length of wire necessary to connect the speakers.
- Be sure that stray wire strands from one speaker terminal do not touch another speaker terminal.

Speaker Placement

Use the following information to help you determine the best location for your speakers. You might want to experiment with various speaker placements.

For the best stereo effect, place each pair of speakers so the distance between the left and right speaker is the same as the distance between the listening area and the point halfway between the speakers. If the distance between the speakers is greater, you can improve the sound by angling the speakers toward you.



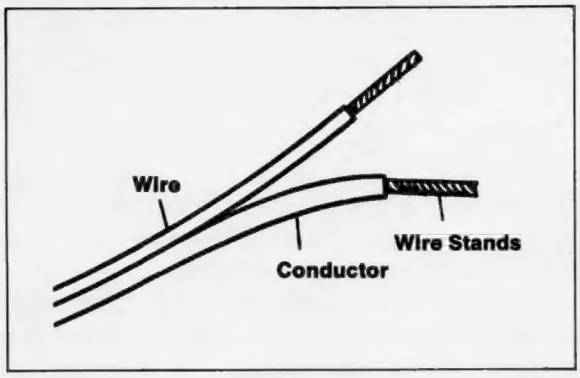
Adjusting the Bass

To increase the bass, place the speakers in the corner of the room, against the wall, or directly on the floor.

To decrease the bass, move the speakers slightly away from the corner, increase the distance between them and the wall, and/or raise them 6 to 8 inches off the floor. You can purchase speaker stands at your local Radio Shack store.

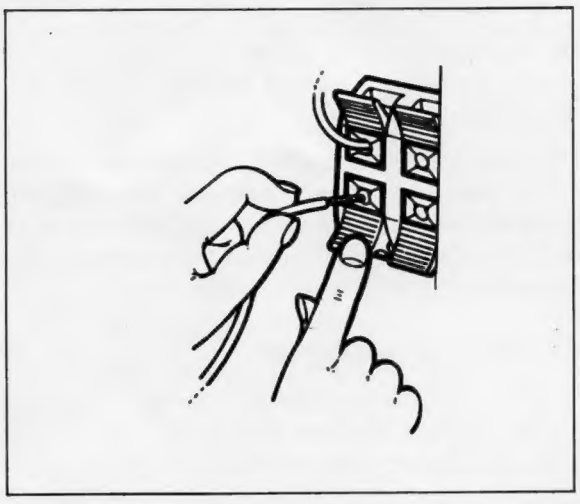
Speaker Connections

1. Select the location for each speaker. Then cut the length of speaker wire needed to connect each speaker to the receiver.
2. Prepare the ends of the speaker wire by doing the following.
   a. Separate the two conductors for a length of about 4 inches.



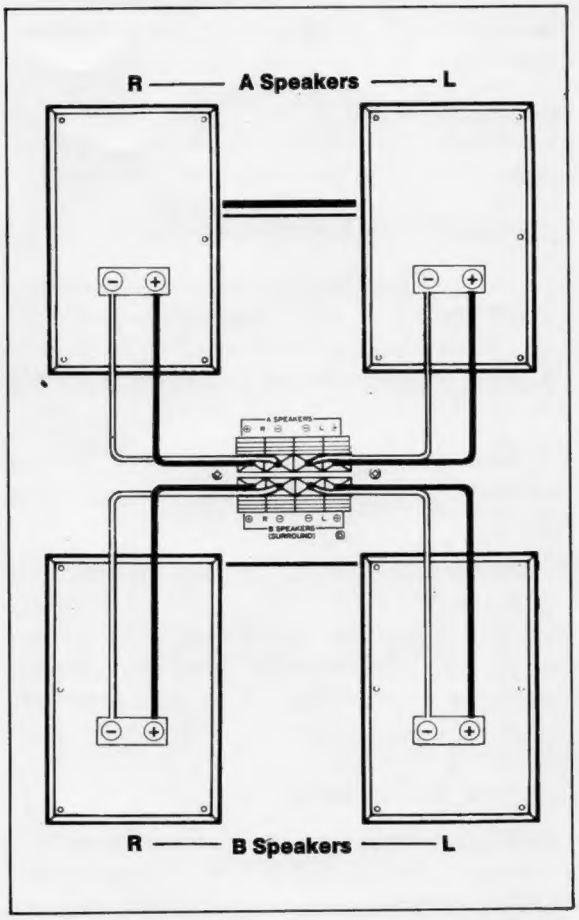
b. Use a wire stripper to remove about ¼ inch of insulation from the end of each conductor.

3. Twist the ends of each conductor. Be sure the wire strands of one conductor do not touch any other conductor's wire strands.
4. Connect the speaker wires to the terminals on the back of each speaker. Connect one conductor to each speaker terminal. If your speakers have spring-loaded terminals, press the terminal's tab, insert the conductor, and release the tab.



If your speakers have another type of connector, see your speakers' owner's manual for instructions for connecting the speaker wire.

5. Connect the speaker wires to the **SPEAKERS** terminals on the back of the receiver.



To connect a conductor to a terminal, press the terminal's tab, insert the conductor, and release the tab.

If you are connecting two pairs of speakers, connect one pair to the **A SPEAKERS** terminals and one pair to the **B SPEAKERS** terminals. If you are connecting only one pair of speakers, you can use either set of terminals.

When connecting a speaker wire, use the wire's color-coding or marking to help you correctly connect it to the receiver's positive or negative terminals. For example, be sure the conductor that is connected to the speaker's negative (–) terminal is connected to the receiver's negative (–) terminal. This greatly affects the bass.

Note: Some speakers' connection terminals are marked + and –. Others have a mark or dot next to the positive terminal and no mark for the negative terminal.

CONNECTING AUDIO SOURCES

You can connect a turntable and a tape deck to the receiver. You can also connect two other audio sources such as a TV, a VCR, or a CD player.

Guidelines for Connecting Audio Sources

- Use only shielded audio cable with RCA-type connectors (not supplied). Your local Radio Shack store sells the required cable.
- Connect each source's left channel output to the receiver's corresponding L input jack. Connect each source's right channel output to the receiver's corresponding R input jack.

Connecting a Turntable

Use a turntable with a magnetic cartridge. For better sound and less wear on your records, we recommend a cartridge with an elliptical stylus.

Note: The output voltage for older ceramic-type cartridges is too high and could damage the receiver. Most newer model turntables use a magnetic cartridge.

Connect the turntable to the receiver's **PHONO** jacks. Connect the turntable's ground wire to the receiver's **PHONO GND** terminal.

Connecting a Tape Deck

Today's high-performance tape decks have special tape bias settings and noise-reduction circuitry. Some decks also offer advanced recording and dubbing capabilities.

Radio Shack's Optimus SCT-5500 (Cat. No. 14-667) or SCT-7500 (Cat. No. 14-668) offers the added convenience of remote operation using the receiver's remote controls.

Connect the tape deck's output jacks to the receiver's **TAPE IN** jacks. Connect the receiver's **TAPE OUT** jacks to the tape deck's input jacks.

Connecting Other Audio Sources

Connect the audio outputs of other audio sources, such as a TV, VCR, or CD player, to the **TV/VCR, CD**, or **AUX** jacks.

These three sets of jacks are identical in function, so you can use each of them with any audio source that has standard line outputs. The jack's names help you associate the connections on the back of the receiver with the selector buttons on the front panel.

CD Players

CD players are free from audible noise and distortion, and provide a dynamic range close to that of a live performance. With proper handling, compact discs last indefinitely.

Features such as search, program, and repeat play make it easy to listen to your favorite tunes. Radio Shack's Optimus CD-5500 (Cat. No. 42-5036) or CD-7500 (Cat. No. 42-5038) offers the added convenience of remote operation using the receiver's remote control.

TVs/VCRs

You can connect your VCR or TV (if your TV has audio output jacks) to your receiver. This allows you to enjoy rich, powerful sound through your system's speakers when you watch TV programs and video cassettes. For the best audio performance, we recommend a VHS Hi-Fi VCR.

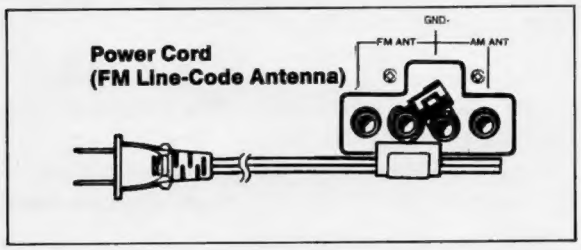
CONNECTING THE REMOTE CABLE

If you use an Optimus SCT-5500/7500 cassette deck or a CD-5500/7500 CD player with this receiver, you can use the receiver's remote control to operate the other component.

Use the remote control cable to connect the receiver's **DIGI LINK** or **DECK PAUSE** jack to the other component's **DIGI LINK** or **DECK PAUSE** jack. This relays the remote control signal from the receiver to the other component.

CONNECTING ANTENNAS

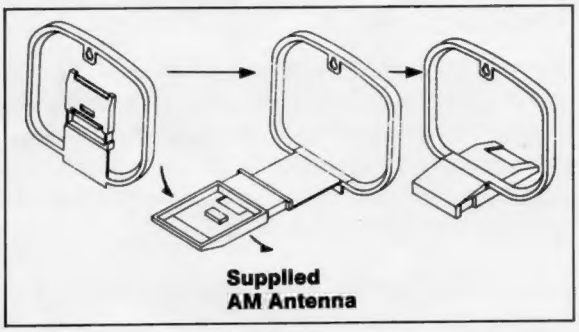
In many cities, the supplied AM loop antenna and FM line-cord antenna provide adequate reception. The FM line-cord antenna (shown below) is already connected to the receiver. It uses the AC power line to receive FM signals.

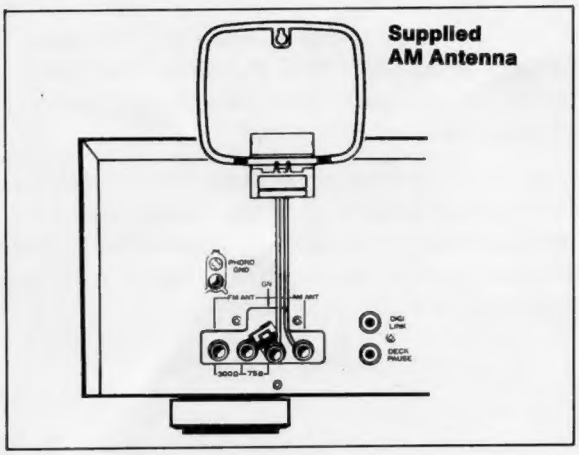


However, for the best radio reception in any area, use an outdoor antenna. Your local Radio Shack store sells a wide selection of outdoor antennas.

Connecting the Supplied AM Antenna

Assemble the antenna's base by swinging the base in the direction of the arrow as shown and snapping the tabs into the groove. Then attach the antenna wires to the receiver's **AM ANT** terminals. Place the antenna on top of or next to the receiver.





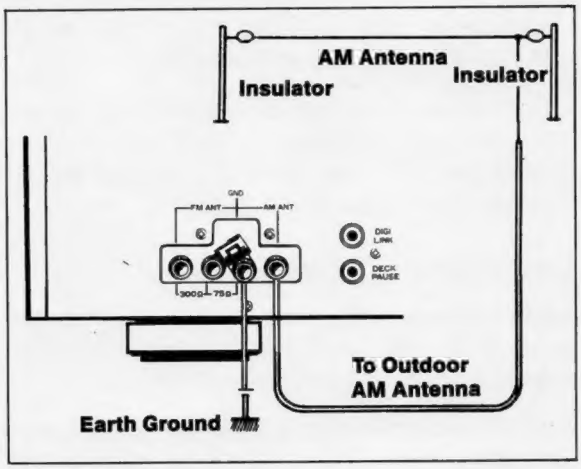
If the receiver is in a rack or on a shelf and there is no room for the AM loop antenna, you can hang the antenna with the keyhole slot. Hang the antenna as close to the receiver as possible.

If the wire between the AM loop antenna and receiver is too short, you can add extra wire. Extra antenna wire is available at your local Radio Shack store.

Connecting an Outdoor AM Antenna

Connect the outdoor antenna's AM wire to the receiver's **AM ANT** terminal. Use a separate piece of antenna wire to connect the **AM ANT GND** terminal to an earth ground, such as a metal cold-water pipe.

Caution: Do not connect an antenna ground to a natural gas pipe. A spark could possibly ignite the gas, causing an explosion.



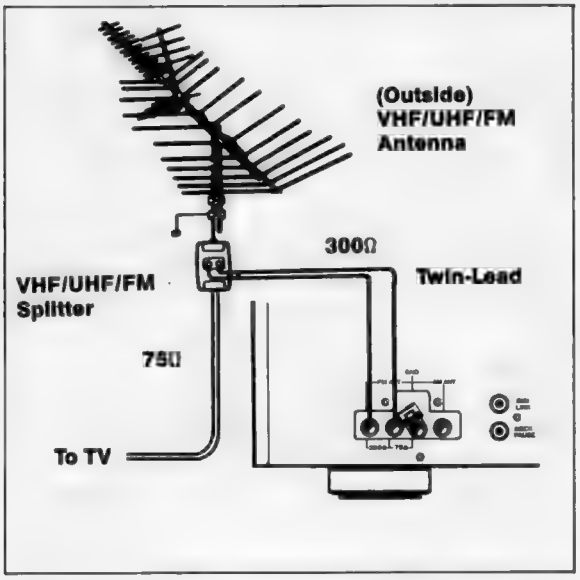
Note: Radio Shack's shortwave antenna kit makes an excellent outdoor AM antenna.

Connecting an FM Antenna

You can also connect a rabbit-ear TV antenna (for indoor use only) or an outdoor VHF/UHF TV antenna for FM reception. Radio Shack stores carry a full line of quality outdoor antennas and antenna connection accessories.

Notes:

- Use a VHF/UHF/FM splitter (not included) to connect an outdoor antenna to both the receiver and a TV. The drawing below illustrates how to split the antenna connection.

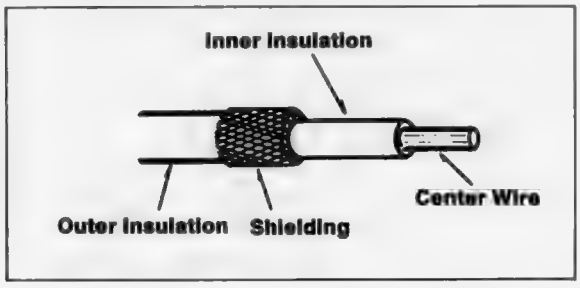


- For the best FM reception, use 75 ohm coaxial cable to connect an outdoor antenna to the receiver. However, if your existing antenna installation uses 300 ohm twin lead cable, you can also use it to make the connection.

First, disconnect the FM line-cord antenna from the receiver's **FM ANT 300 Ω** terminal. Then connect the antenna wire as follows, depending on the cable type.

If the antenna wire is 75 ohm cable:

1. With a stripping tool, remove about 1 inch of the 75 ohm cable's outer insulation to expose the cable's shielding. Then fold back the shielding from the inner insulation.
2. Strip off about ½ inch of the inner insulation around the center wire.
3. Pull the shielding back over the inner insulation. Insert both the shielding and wire through the metal clamp connected to the **FM ANT GND** terminal. Then connect the center wire to the receiver's **FM ANT 75 ohm** terminal, and secure the shielding with the **GND** terminal's clamp.



Caution: The cable's shielding should only touch the **GND** terminal.

If the antenna wire is 300 ohm twin-lead cable, connect each lead to one of the receiver's **FM ANT** terminals.

CONNECTING TO POWER

Connect the receiver's power cord to any standard AC outlet.

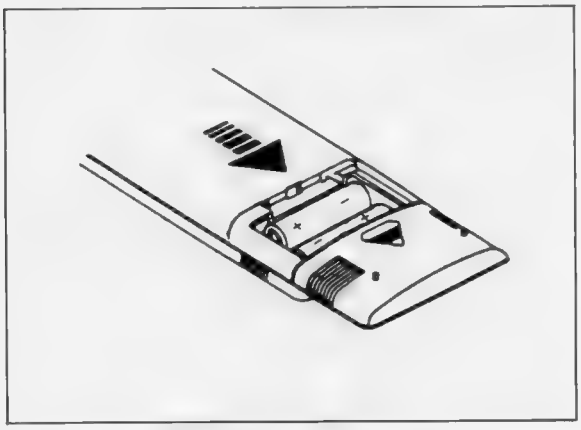
Switched Power Outlets

The two outlets on the back of the receiver provide AC power for other system components, such as a compatible CD player or cassette deck. The outlets are switched (they turn on and off with the receiver).

Warning: To avoid a fire hazard and to protect the receiver, do not connect a device with high power consumption (such as a heater, iron, hair dryer, television, or refrigerator) to either outlet.

INSTALLING THE REMOTE CONTROL'S BATTERIES

The remote control uses two AA batteries (not included). For the longest battery life, we recommend Radio Shack's alkaline batteries (Cat. No. 23-552).



1. Remove the battery compartment cover by pressing the cover in the direction of the arrow.
2. Insert the batteries as indicated by the polarity symbols (+ and –) marked in the battery compartment.
3. Replace the compartment cover.

USING THE REMOTE CONTROL

Most of the buttons on the remote control are identical in function to buttons on the receiver's front panel. Use these buttons exactly as you use the corresponding buttons on the receiver.

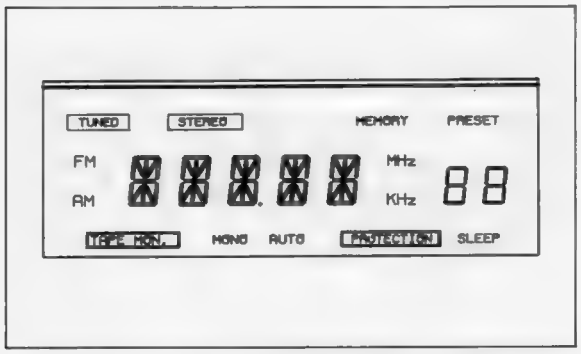
The remote control is effective up to a distance of about 20 feet and within a 30-degree angle on either side of the receiver. Point the control at the receiver's **REMOTE SENSOR** window and press the desired button(s).

Notes:

- If remote operation becomes erratic or stops completely, install two fresh AA alkaline batteries.
- Memory tuning using the remote control is slightly different from using the receiver's buttons. See "Memory Tuning" under "Operation."
- You can control a CD-5500/7500 CD player or a SCT-5500/7500 cassette deck with this receiver's remote control, if you connect the component to the receiver using the remote control cable. (See "Connecting the Remote Cable.")

SELECTING A PROGRAM SOURCE

To select the receiver's built-in AM or FM radio, press **AM** or **FM**. To select any external program source that you connect to the receiver, press the corresponding source button — **TAPE MONITOR, CD, AUX, PHONO,** or **TV/VCR**. The display shows the selected source.



Caution: To prevent accidental overload, turn **VOLUME** to 0 before you select program source.

Note: Be sure to read the instructions for all of your system's components.

SETTING THE VOLUME

The **VOLUME** control is labeled with numbers so you can reference a number for a specific volume level. Turn **VOLUME** clockwise to increase the volume and counterclockwise to decrease it.

Note: When you increase or decrease the volume with the remote control, the volume control moves clockwise or counterclockwise, respectively.

BASIC OPERATION

Warning: To prevent possible hearing loss, turn **VOLUME** to 0 before you turn on the receiver or change the audio source. After you turn on the receiver or change the audio source, adjust **VOLUME** to a comfortable listening level.

Follow these steps to use the receiver.

1. Press **POWER** to turn on the receiver's power. The **STANDBY** indicator goes off and the **PROTECTION** indicator lights. After a few seconds, the **PROTECTION** indicator goes off. (See "Built-in Protection Circuits.")
2. Select the speakers as follows.
   - Press in **A** or **B** to turn on either pair of speakers for a two-speaker stereo effect.
   - Press in **A** and **B** to turn on both pairs of speakers for a four-speaker stereo effect.
   - To turn off a pair of speakers, press out the corresponding button to release it.

   Note: If you connect only one pair of speakers, press only the corresponding **SPEAKER** (**A** or **B**) button. Otherwise, you mute the sound from the connected speakers.
3. Select the audio source as follows:
   - To listen to a tape, press **TAPE MONITOR** so the **TAPE MON** indicator lights.
   - To listen to a source other than a tape deck, be sure the **TAPE MON** indicator is off (if necessary, press **TAPE MONITOR** so the indicator goes off). Then press **PHONO, CD, AUX, TV/VCR, AM,** or **FM** to select the audio source.
4. To tune to a radio station, press **TUNE** ▶ or **TUNE** ◀ to tune up or down in the selected band.

   Note: See "Tuning to a Radio Station" for information about memory tuning.
5. Adjust **VOLUME**.

   To boost the bass and treble when listening at low volumes, press in **LOUDNESS**.
6. Press **POWER** to turn off the receiver. The **STANDBY** indicator lights.

TUNING TO A RADIO STATION

You can use manual, search, or memory tuning to select a radio station.

Notes:

- If you are using the supplied AM loop antenna, reposition it for the best AM reception.
- **TUNED** appears on the display when the receiver tunes to a strong frequency.
- **FM STEREO** appears on the display when the signal is stereo.

Manual Tuning

Follow these steps to manually tune to a radio station.

1. Press **AM** or **FM** to select the band. The display shows the selected band.
2. Press **TUNE ▶** or **TUNE ◀** to tune up or down the band. The display shows the selected frequency.

Search Tuning

Use search tuning to quickly find strong AM or FM stations.

1. Press **AM** or **FM**.
2. Press **AUTO SEARCH** to turn on the search function. **AUTO** appears on the display.
3. Press **TUNE ◀** or **TUNE ▶**. The receiver searches down or up the selected band until it finds a strong radio frequency. **TUNED, FM STEREO,** or both appear on the display.

Manual and Search Tuning Hints

Use manual tuning to locate a weak **FM** station. If reception for the weak station is poor, press **FM MONO** so **MONO** appears on the display. The sound is no longer in stereo, but reception improves.

The receiver displays FM frequencies in 0.2 megahertz (MHz) intervals and AM frequencies in 10 kilohertz (kHz) intervals.

If you press **TUNE ▶** when the display is at the top of the frequency range (AM-1710 kHz, FM-107.9 MHz), the display returns to the bottom of the range (AM-520 kHz, FM-87.5MHz). If you press **TUNE ◀** when the display is at the bottom of the frequency range, the display returns to the top of the range.

When you select the AM or FM radio band, the receiver displays the last frequency selected on that band.

MEMORY TUNING

The memory tuning feature lets you instantly tune to a frequency you stored in one of 30 memory locations. Each location can hold an AM or FM frequency.

To store a frequency, follow these steps.

1. Press **AM** or **FM**.
2. Use manual or search tuning to select the frequency you want to store.
3. Press **MEMORY. MEMORY** flashes on the display for about 5 seconds.
4. While **MEMORY** flashes, press the memory preset button(s) (1-30) to select the desired memory location (for example, press 1 and 4 for location number 14). This stores the frequency.

To tune to a stored frequency, press the desired memory location number button(s). If you use the remote control to tune to a frequency, press **TUNER** first, and then press the desired memory location number.

Notes:

- When you store a frequency in a memory location that already contains a frequency, you replace the previous frequency.
- If the receiver is disconnected from AC power for more than three days, it loses all the stored frequencies.

Scanning Memory Stations

Press **MEMORY SCAN** to scan the frequencies stored in memory. The receiver stops for about 5 seconds at each memory location that contains a frequency so you can hear a station before scanning resumes.

To stop scanning, press **MEMORY SCAN** again or any of the memory preset buttons.

RECORDING A TAPE

If you connect a tape deck to the receiver as described in "Connecting Audio Sources," you can record one of the receiver's other audio sources on the deck.

Press **PHONO, TV/VCR, CD, AUX, AM** or **FM** to select the audio source you want to record. Then begin recording.

To ensure that the tape deck is receiving the signal, press **TAPE MONITOR** so the **TAPE MON** indicator lights. You can hear the recording from the tape deck as it is made, if your tape deck has a tape monitoring function.

If you want to listen directly to the audio source as you record, press **TAPE MONITOR** so the **TAPE MON** indicator is off.

USING HEADPHONES

A good pair of stereo headphones is a valuable addition to a home stereo system. They provide convenient private listening and an enhanced stereo effect. Your receiver's front panel **PHONES** jack accepts any low-impedance stereo headphones with a ¼-inch plug. Before buying your headphones, wear them long enough to be sure they are comfortable.

To listen through headphones, insert the ¼-inch plug of a pair of low-impedance stereo headphones (not supplied) into the receiver's **PHONES** jack.

For private listening, turn off the speakers by pressing **SPEAKERS A/B** so both buttons are in the out position.

Listening Safely

To protect your hearing, follow these guidelines when you use headphones.

- Turn **VOLUME** to 0 before you begin listening. After you begin listening, adjust the volume to a comfortable level.
- Do not listen at extremely high volume levels. Extended high-volume listening can lead to permanent hearing loss.
- Once you set the volume, do not increase it. Over time, your ears adapt to the volume level, so a volume level that does not cause discomfort might still damage your hearing.

SLEEPTIMER

You can set the receiver to automatically turn off after 10, 20, 30, 60 or 90 minutes. To start the sleeptimer, press **SLEEP** button until the desired turn-off time appears on the display.

ADJUSTING THE SOUND

Use the following controls to adjust the sound to suit your listening preferences.

Surround Button

If you are using 4 speakers, your receiver's surround effect feature provides a fuller, more spacious sound for your stereo programs. Press **SURROUND** to turn on the surround feature.

To turn off the surround feature, press **SURROUND** again.

Balance

The **BALANCE** control lets you adjust the balance between the left and right speakers. This control affects both pairs of speakers (A and B). If your speakers are properly positioned and your listening area is centered between the speakers, the **BALANCE** control's center setting is usually best.

For unusual speaker placements, adjust the balance as follows:

1. Tune to an **FM** station.
2. Press **FM MONO** so the **MONO** indicator lights.
3. Adjust **BALANCE** until the sound seems to be coming from a point halfway between the two speakers.
4. Press **FM MONO** so the **MONO** indicator goes off to return to normal FM reception.

Bass and Treble

Adjust the **BASS** control to increase or decrease low frequency sounds, such as those from a bass drum or bass guitar.

Adjust the **TREBLE** control to increase or decrease high frequency sounds, such as those from a violin, piccolo, or cymbals.

Mute Function

Press **MUTE** on the remote control to silence the speakers. **MUTE** appears on the display while the muting function is on. To turn off the mute function, press **MUTE** so **MUTE** disappears from the display.

PROBLEM SOLVING

If you receiver is not working as it should, the following suggestions might help you. If you follow the suggestions in this chart and the receiver still does not work properly, contact your local Radio Shack store for assistance.

Problem	Cause/Remedy
No power (all indicators are off).	Press **POWER**. Be sure the power cord is plugged in. Try a different AC outlet. Check the fuse.
No sound.	If you are listening to an audio source other than the tape deck, be sure **TAPE MON** is not lit. If necessary, press **TAPE MONITOR** so the indicator goes off. Check the volume level. Check the **SPEAKER** buttons. If you connect only one pair of speakers, press only the corresponding **SPEAKER** button. Check the audio source connections. Be sure you have selected the correct audio source. Check the speaker connections. If the **PROTECTION** indicator comes on, a built-in protection circuit has turned off the amplifier. Press **POWER** to turn off the receiver. Then: — Be sure the speakers are correctly connected. Be sure there are no stray wire strands touching other wire strands or metal objects. — Be sure the receiver is adequately ventilated. — Be sure the speakers have an impedance of 8 to 16 ohms.
Low-pitched humming on AM.	Move the power cord away from the AM antenna connection wires. If there is a TV near the receiver, turn it off or move the receiver away from the TV.

CARE AND MAINTENANCE

Your Optimus STA-7500 AM/FM Stereo Receiver is an example of superior design and craftsmanship. The following suggestions will help you care for your receiver so you can enjoy it for years.

Keep the receiver dry. If it does get wet, wipe it dry immediately. Liquids can contain minerals that can corrode the electronic circuits.

Use and store the receiver only in normal temperature environments. Temperature extremes can shorten the life of electronic devices and distort or melt plastic parts.

Handle the receiver gently and carefully. Dropping it can damage circuit boards and cases and can cause the receiver to work improperly.

Keep the receiver away from dust and dirt, which can cause premature wear of parts.

Wipe the receiver with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean your receiver.

Modifying or tampering with the receiver's internal components can cause a malfunction and might invalidate its warranty and void your FCC authorization to operate the receiver. If your receiver is not performing as it should, take it to your local Radio Shack store for assistance.

THE FCC WANTS YOU TO KNOW

Your receiver might cause interference on other radio/TV devices even when it is operating properly. To determine whether your receiver is causing the interference, turn off your receiver. If the interference goes away, your receiver is causing the interference. Try to eliminate the interference by:

- Moving your receiver away from the other device.
- Connecting your receiver to an outlet that is on a different electrical circuit from the other device.
- Contacting your local Radio Shack store for help.

If you cannot eliminate the interference, the FCC requires that you stop using your receiver.

Caution: Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

SPECIFICATIONS

70 watts per channel, minimum RMS into 8 ohms from 40-20,000 Hz, with no more than 0.1% THD

GENERAL

Power Source . . . . . AC 120 Volts, 60Hz
Power Consumption . . . . . 180 Watts
Dimensions (HWD) . . . . . $4^{11}/_{16} \times 16^{7}/_{16} \times 12^{3}/_{16}$ inches (11×42×28.5 cm)
Weight . . . . . 16.53 lbs (7.5Kg)

AMPLIFIER

Frequency Response (Aux 1W, 8Ω load) . . . . . 40-20,000 Hz ± 1dB
IM Distortion (60 watts) 0.1%
Signal-to-Noise Ratio . . . . . 82 dB(PHONO) 93 dB (AUX)
Input Sensitivity
  PHONO 2.5mV
  CD/AUX, TV, VCR and TAPE IN 150mV
Phono Equalization . . . . . ± 2 dB
Tone Control Action
  Bass . . . . . ± 10 dB @ 100 Hz
  Treble . . . . . ± 10 dB @ 10 kHz
Total Harmonic Distortion (60 watts):
  40 Hz 0.01%
  1 kHz 0.01%
  20 kHz 0.05%
Loudness Compensation
  10 kHz . . . . . +4 dB
  100 Hz . . . . . +6 dB

FM TUNER

Tuning Range . . . . . 87.50-107.90 MHz
IHF Sensitivity (3% THD) . . . . . 16.4 dBF
Limiting Sensitivity (–3dB) . . . . . 9.3 dBF
Signal-to-Noise Ratio . . . . . 72 dB
Capture Ratio . . . . . 1.5 dB
Total Harmonic Distortion (1 mV)
  Mono 0.23%
  Stereo 0.3%
Image Rejection . . . . . 43 dB
IF Rejection . . . . . 72 dB
Selectivity . . . . . 48 dB
Channel Separation @ 1 kHz . . . . . 43 dB

AM TUNER

Tuning Range . . . . . 520-1710 kHz
Sensitivity (for 20 dB S/N) . . . . . 350 μV/m
Image Rejection . . . . . 35 dB @ 1,400 kHz
IF Rejection . . . . . 56 dB @ 600 kHz
AGC Figure-of-merit (100 mV/m) . . . . . 58 dB
Total Harmonic Distortion (5 mV/m) 0.9%
Signal-to-Noise Ratio (5 mV/m) . . . . . 43 dB
RF Interference Rejection . . . . . Rated Excellent

NOTES

RADIO SHACK LIMITED WARRANTY

This product is warranted against defects for 2 years from date of purchase from Radio Shack company-owned stores and authorized Radio Shack franchisees and dealers. Within this period, we will repair it without charge for parts and labor. Simply **bring your Radio Shack sales slip** as proof of purchase date to any Radio Shack store. Warranty does not cover transportation costs. Nor does it cover a product subjected to misuse or accidental damage.

EXCEPT AS PROVIDED HEREIN, RADIO SHACK MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

We Service What We Sell

RADIO SHACK
A Division of Tandy Corporation
Fort Worth, Texas 76102

9A3

9007017460
Printed in Korea